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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

In re Application of: Strolle	:	Docket No.: SAR 12082
Serial No.: 08/869,589	:	Filed: June 5, 1997
Group Art Unit: 2631	:	Examiner: Kevin Burd

Title: **METHOD AND APPARATUS FOR PERFORMING BANDEDGE EQUALIZATION**

REPLY BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This Reply Brief is filed under the provisions of 37 CFR 1.193(b).

IDENTIFICATION OF, AND REPLY TO, NEW POINTS OF ARGUMENT

The following points of argument have been either newly presented in the Examiner's Answer or presented in a different light by the Examiner than earlier in the record.

1) On page 9 of the Examiner's Answer, the Examiner alleged that "If the entire signal is compensated for amplitude distortion, the bandedges of the signal will be compensated for amplitude distortion since the bandedges are a component of the original signal. This statement, at least suggests amplitude distortion compensation takes place in the delay line." On page 10 of the Examiner's Answer, the Examiner acknowledged that Norrell does not explicitly state that amplitude adjustment of the bandedges occurs in the system, but alleged that "with the statement found in column 9, lines 44-48, Norrell at least suggests amplitude distortion compensation is

capable of taking place in the equalizer delay line." These statements represent a misapplication of the Norrell et al. reference (hereinafter Norrell) to claims 1 and 12 of Applicant's invention.

The section for "Amplitude Distortion Compensation" is clearly indicated as column 9, lines 1-16 of Norrell. (See Norrell, column 9, line 1 with the heading "Amplitude Distortion Compensation" and column 9, line 17 with the heading "Delay Distortion Compensation"). In this section for "Amplitude Distortion Compensation, Norrell teaches the use of an upper bandedge filter (UBEF) and a lower bandedge filter (LBEF) to pass energy in a region centered at the respective upper and lower bandedges and sharply attenuate the energy of a band between the upper and lower bandedges. (See Norrell, column 9, lines 2-8). The passing of a signal centered at the upper and lower bandedges not only fails to teach the amplitude adjustment of bandedges but also teaches away from such amplitude adjustment of bandedges. Moreover, the section on "Amplitude Distortion Compensation" only describes the operation of the upper and lower bandedge filters, and not the equalizer delay line. (See Norrell, column 9, lines 1-17, and Figure 5, items 508 and 512).

The Examiner relied to column 9, lines 44-48 to support the allegation that the compensation of amplitude distortion occurs in the equalizer delay line. However, the cited section (Norrell, column 9, lines 44-48) fails to support the Examiner's allegation. Specifically, the equalizer delay line compensates for the delay between the upper and lower bandedges by introducing, for example, a delay to the samples at the upper bandedge filter. The delay compensation of the bandedge signals enables the upper and lower bandedge filters to simultaneously receive the samples at the respective upper and lower bandedges. The upper and lower bandedge filters then performs the amplitude compensation described in column 9, lines 1-17 of Norrell, i.e., pass the energy in region centered at the upper and lower bandedges and sharply attenuate the energy of a band between the upper and lower bandedges.

Thus, the equalizer delay line performs delay compensation for enabling the upper and bandedge filters to perform amplitude compensation. In other words, amplitude compensation does not occur in the equalizer delay line, as alleged by the Examiner, but rather through the upper and lower bandedge filters. (See Norrell, column 9, lines 1-17). As previously described above, this form of amplitude compensation teaches away from the adjustment of bandedges as recited in claims 1 and 12 of Applicants' invention, i.e., using a pre-equalizer to equalize the bandedge signals before filtering.

2) On page 10 of the Examiner's Answer, the Examiner also alleged that "if the 'amplitude equalization of the channel' (column 9, line 12) adjust the amplitude of the entire signal, the bandedges, which are a component of the signal, will also be amplitude adjusted." The amplitude equalization of a channel necessarily involves the adjustment of an entire frequency spectrum. Although the adjustment of the entire frequency spectrum may also affect the signal at the bandedge, there is no specifically identifiable step of adjusting the bandedges. Thus, the equalization of the channel, i.e., the entire frequency response, is clearly different and teaches away from the adjustment of amplitude of the bandedges of a broadband signal prior to bandedge filtering as recited in claims 1 and 12 of Applicants' invention.

CONCLUSION

For the reasons advanced above, Appellants state that the rejection of claims 1, 9-10, 12 and 15-16 being anticipated under 35 U.S.C. § 102 is improper. Reversal of the rejection in this appeal is respectfully requested.

If necessary, please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit

Account 20-0782, and please credit any excess fees to the above referenced deposit account.

Respectfully submitted,

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